Abstracts

Low Noise MESFETs for Ion Implanted GaAs MMICs

A.K. Gupta, D.P. Siu, K.T. Ip and W.C. Petersen. "Low Noise MESFETs for Ion Implanted GaAs MMICs." 1983 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 83.1 (1983 [MCS]): 27-30.

Fabrication considerations for low noise FETs in ion implanted GaAs MMICS are presented. Processes that can deteriorate FET performance have been identified and some solutions proposed. Low noise MMIC FETs fabricated along these lines show good microwave performance through 18 GHz, approaching the performance available from similar discrete FETs. 0.8 µm gate length MMIC FETs with a noise figure of 2.9 dB and associated gain of 6.1 dB at 18 GHz have been fabricated. These devices are suitable for low noise applications in ion implanted GaAs MMICS.

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